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Jew O. K.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Thomas J. CAMPANA, Jr., et al  
Serial No.: 07/702,939  
Filed: May 20, 1991  
For: ELECTRONIC MAIL SYSTEM WITH  
RF COMMUNICATIONS TO MOBILE  
PROCESSORS  
Group: 261  
Examiner: G. Oehling

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RWM  
4/21/93

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AMENDMENT

Honorable Commissioner of  
Patents and Trademarks  
Washington, D. C. 20231

February 25, 1993

Sir:

This is in response to the first Office Action of  
January 11, 1993.

IN THE SPECIFICATION:

Please amend the specification as follows:

✓ Page ii, line 6, delete the blank line "\_\_\_\_\_", and  
insert --07/702,319--;

✓ line 8, delete "(Attorney Docket";

✓ line 9, delete "No. 780.29766X00)";

line 11, delete the blank line "\_\_\_\_\_", and  
insert 0007/702,938";

A

I hereby certify that this correspondence is being  
deposited with the United States Postal Service as  
first class mail in an envelope addressed to: Com-  
missioner of Patents and Trademarks, Washington,  
D.C. 20231, on 2/25/93

Jean McPhail

Page ii, line 12, after "communications" insert a period  
--- and delete "(Attorney"; and  
line 13, delete in its entirety.

Page 2, line 28, change "switch" to --switches--.

Page 5, line 31, after "finding" insert --a-- and change  
"jacks" to --jack--; and  
line 35, delete "and".

Page 6, line 15, delete "is".

Page 36, line 3, change "an" (second occurrence only)  
to --a--; and  
line 8, change "a" to --an--.

Page 37, line 19, after "to" insert --a--.

Page 38, line 12, change "an" to --a--; and  
line 13, delete "relay it" and insert therefor -  
-transfer the information--.

Page 39, line 18, change "relays" to --transfers--;  
line 26, change "relaying" to --transfer--; and  
line 35, after "storing" insert --the--.

Page 40, line 1, change "processor" to --processors--;

line 4, delete "stored" and insert --the--;

line 9, delete "stored" and insert --the--;

line 10, after "switch" insert --from the one of

A<sub>1</sub> the plurality of originating processors;

line 11, after "information" insert --from the

A<sub>2</sub> one of the plurality of originating processors;

line 15, delete "originated by" and insert therefor --from--, after "the" insert --one of the plurality of--, and change "processor" to --processors--;

line 16, after "or" insert --the-- and after "switch" insert --receiving the information--; and

lines 26, 30 and 33, delete "originated by" and insert therefor --from--.

Page 41, line 10, delete "it" and insert therefor --the information--.

Page 42, line 24, delete "originated by" and insert therefor --from--.

Page 43, line 16, delete "relaying" and insert therefor -transferring--;

line 18, delete "originated by" and insert therefor --from--; and

64

Page 43, line 21, delete "originated by" and insert therefor --from--.

Page 44, lines 6 and 10, delete "originated by" and insert therefor --from--.

**IN THE CLAIMS:**

Please amend the claims as follows:

1. (Amended) An electronic mail system for transmitting information from one of a plurality of originating processors to at least one of a plurality of destination processors [during operation] comprising:

at least one gateway switch, a gateway switch storing the information received from the one of the [at least one] plurality of originating ~~[processor] processors~~ prior to transmission of the information to ~~the~~ at least one destination processor;

a RF information transmission network for transmitting [stored] the information received from one of the at least one gateway switch by RF transmission to the at least one destination processor;

at least one interface switch, an interface switch connecting a gateway switch to the RF transmission network and transmitting [stored] the information received from one of the at least one gateway switch from the one of the plurality of

originating processors to the RF information transmission network; and wherein

the information from the one of the plurality of originating processors is transmitted to a receiving interface switch by the electronic mail system in response to an address of the receiving interface switch which has been added to the information [originated by] from one of the plurality of originating [processor] processors by either the one of the plurality of originating [processor] processors or the gateway switch receiving the information and the information is transmitted from the receiving interface switch to the RF information transmission network with an address of the destination processor to receive the information which has been added by either the originating processor, a gateway switch or the receiving interface switch.

2. (Amended) An electronic mail system in accordance with claim 1 wherein:

the receiving interface switch removes information added by the electronic mail system to the information [originated by] from the originating processor [from the stored information received from one of the at least one gateway switch] and adds information used by the RF information transmission network during transmission of the information to the information [originated by] from the originating processor to a RF receiver in the RF information

transmission network which receives the information and [relays it] transfers the information to the destination processor.

3. (Amended) An electronic mail system in accordance with claim 1 wherein:

the address of the destination processor is an identification number of a RF receiver in the RF information transmission network which receives the information and [relays it] transfers the information to the destination processor; and

the receiving interface switch stores information which has been stored by at least one gateway switch that is received from a plurality of originating processors, assembles the information from a plurality of originating processors into a packet and transmits the packet to the RF information transmission network.

4. (Amended) An electronic mail system in accordance with claim 3 wherein the RF information transmission network comprises:

a switch which receives the packet from the receiving interface switch and disassembles the packet into information from the plurality of originating processors; and wherein

A 3  
cont.

the RF information transmission network transmits the disassembled information, including the identification number of the RF receiver [relaying] transferring the information to [a] the destination processor to a switch in the RF information transmission network storing a file identified by the identification number and any destination of the RF receiver in the RF information transmission network to which the information and identification number is to be transmitted by the RF information transmission network and adds any destination of the RF receiver to the information and the RF information transmission network in response to any added destination transmits the information and identification number to the destination for RF broadcast to the RF receiver for [relaying] transfer to the destination processor.

5. (Amended) An electronic mail system in accordance with claim 2 wherein:

the address of the destination processor is an identification number of a RF receiver in the RF transmission network which receives the information and relays [it] the information to the destination processor; and

the receiving interface switch stores the information which has been stored by the at least one gateway switch that is received from a plurality of originating processors, assembles the information from a plurality of

originating processors into a packet and transmits the packet to the RF information transmission network.

6. (Amended) An electronic mail system in accordance with claim 5 wherein the RF information transmission network comprises:

A  
cont  
a switch which receives the packet from the receiving interface switch and disassembles the packet into information from the plurality of originating processors; and wherein

the RF information transmission network transmits the disassembled information, including the identification number of the RF receiver relaying the information to the destination processor to a switch in the RF information transmission network storing a file identified by the identification number and any destination of the RF receiver in the RF information transmission network to which the information and identification number is to be transmitted by the RF information transmission network and adds any destination of the RF receiver to the information and the RF information transmission network in response to any added destination transmits the information and identification number to the destination for RF broadcast to the RF receiver for relaying to the destination processor.



7. (Amended) An electronic mail system in accordance with claim 1 wherein:

the electronic mail system also transmits information between an originating processor and at least one destination processor through either a public or private switch telephone network without transmission by the RF information transmission network with the destination processor being addressed by a different address during transmission to the destination processor when using the public or private switch telephone network [transmission network] than during transmission by the RF information transmission network.

8. (Amended) An electronic mail system in accordance with claim 2 wherein:

the electronic mail system also transmits information between an originating processor and at least one destination processor through either a public or private switch telephone network without transmission by the RF information transmission network with the destination processor being addressed by a different address during transmission to the destination processor when using the public or private switch telephone network [transmission network] than during transmission by the RF information transmission network.

9. (Amended) An electronic mail system in accordance with claim 3 wherein:

the electronic mail system also transmits information between an originating processor and at least one destination processor through either a public or private switch telephone network without transmission by the RF information transmission network with the destination processor being addressed by a different address during transmission to the destination processor when using the public or private switch telephone network [transmission network] than during transmission by the RF information transmission network.

10. (Amended) An electronic mail system in accordance with claim 4 wherein:

the electronic mail system also transmits information between an originating processor and at least one destination processor through either a public or private switch telephone network without transmission by the RF information transmission network with the destination processor being addressed by a different address during transmission to the destination processor when using the public or private switch telephone network [transmission network] than during transmission by the RF information transmission network.

11. (Amended) An electronic mail system in accordance with claim 5 wherein:

the electronic mail system also transmits information between an originating processor and at least one destination processor through either a public or private switch telephone network without transmission by the RF information transmission network with the destination processor being addressed by a different address during transmission to the destination processor when using the public or private switch telephone network [transmission network] than during transmission by the RF information transmission network.

12. (Amended) An electronic mail system in accordance with claim 6 wherein:

the electronic mail system also transmits information between an originating processor and at least one destination processor through either a public or private switch telephone network without transmission by the RF information transmission network with the destination processor being addressed by a different address during transmission to the destination processor when using the public or private switch telephone network [transmission network] than during transmission by the RF information transmission network.

14. (Amended) An electronic mail system in accordance with claim 1 wherein:

the address of the receiving interface switch is added to the information [originated by] from the originating processor by a gateway switch.

15. (Amended) An electronic mail system in accordance with claim 1 wherein:

the address of the receiving interface switch is added to the information from the originating processor by the originating processor.

16. (Amended) An electronic mail system in accordance with claim 1 wherein:

the address of the destination processor is an identification number of a RF receiver receiving the information and [relaying] transferring the information to the destination processor and is added to the information [originated by] from the originating processor by the originating processor.

17. (Amended) An electronic mail system in accordance with claim 1 wherein:

the address of the destination processor is an identification number of a RF receiver receiving the information and [relaying] transferring the information to the

destination processor and is added to the information [originated by] from the originating processor by the gateway switch.

18. (Amended) An electronic mail system in accordance with claim 1 wherein:

the address of the destination processor is an identification number of a RF receiver receiving the information and [relaying] transferring the information to the destination processor and is added to the information [originated by] from the originating processor by the receiving interface switch.

19. (Amended) An electronic mail system in accordance with claim 2 wherein:

the address of the receiving interface switch is added to the information [originated by] from the originating processor by a gateway switch.

20. (Amended) An electronic mail system in accordance with claim 2 wherein:

the address of the receiving interface switch is added to the information from the originating processor by the originating processor.

21. (Amended) An electronic mail system in accordance with claim 2 wherein:

the identification number of the RF receiver is added to the information [originated by] from the originating processor by the originating processor.

22. (Amended) An electronic mail system in accordance with claim 2 wherein:

the identification number of the RF receiver is added to the information [originated by] from the originating processor by the gateway switch.

23. (Amended) An electronic mail system in accordance with claim 2 wherein:

the identification number of the RF receiver is added to the information [originated by] from the originating processor by the receiving interface switch.

24. (Amended) An electronic mail system in accordance with claim 3 wherein:

the address of the receiving interface switch is added to the information [originated by] from the originating processor by a gateway switch.

25. (Amended) An electronic mail system in accordance with claim [13] 3 wherein:

the address of the receiving interface switch is added to the information from the originating processor by the originating processor.

26. (Amended) An electronic mail system in accordance with claim [13] 3 wherein:

the identification number of the RF receiver is added to the information [originated by] from the originating processor by the originating processor.

27. (Amended) An electronic mail system in accordance with claim [13] 3 wherein:

the identification number of the RF receiver is added to the information [originated by] from the originating processor by the gateway switch.

28. (Amended) An electronic mail system in accordance with claim [13] 3 wherein:

the identification number of the RF receiver is added to the information [originated by] from the originating processor by the receiving interface switch.

29. (Amended) An electronic mail system in accordance with claim 4 wherein:

the address of the receiving interface switch is added to the information [originated by] from the originating processor by a gateway switch.

30. (Amended) An electronic mail system in accordance with claim 4 wherein:

the address of the receiving interface switch is added to the information from the originating processor by the originating processor.

31. (Amended) An electronic mail system in accordance with claim 4 wherein:

the identification number of the RF receiver [receiving the information and relaying the information to the destination processor and] is added to the information [originated by] from the originating processor by the originating processor.

32. (Amended) An electronic mail system in accordance with claim 4 wherein:

the identification number of the RF receiver is added to the information [originated by] from the originating processor by the gateway switch.



33. (Amended) An electronic mail system in accordance with claim 4 wherein:

the identification number of the RF receiver is added to the information [originated by] from the originating processor by the receiving interface switch.

34. (Amended) An electronic mail system in accordance with claim 5 wherein:

the address of the receiving interface switch is added to the information [originated by] from the originating processor by a gateway switch.

35. (Amended) An electronic mail system in accordance with claim 5 wherein:

the address of the receiving interface switch is added to the information from the originating processor by the originating processor.

36. (Amended) An electronic mail system in accordance with claim 5 wherein:

the identification number of the RF receiver is added to the information [originated by] from the originating processor by the originating processor.

37. (Amended) An electronic mail system in accordance with claim 5 wherein:

the identification number of [an] the RF receiver is added to the information [originated by] from the originating processor by the gateway switch.

38. (Amended) An electronic mail system in accordance with claim 5 wherein:

the identification number of the RF receiver is added to the information [originated by] from the originating processor by the receiving interface switch.

39. (Amended) An electronic mail system in accordance with claim 6 wherein:

the address of the receiving interface switch is added to the information [originated by] from the originating processor by a gateway switch.

40. (Amended) An electronic mail system in accordance with claim 6 wherein:

the address of the receiving interface switch is added to the information from the originating processor by the originating processor.

41. (Amended) An electronic mail system in accordance with claim 6 wherein:

the identification number of the RF receiver is added to the information [originated by] from the originating processor by the originating processor.

42. (Amended) An electronic mail system in accordance with claim 6 wherein:

the identification number of the RF receiver is added to the information [originated by] from the originating processor by the gateway switch.

43. (Amended) An electronic mail system in accordance with claim 6 wherein:

the identification number of the RF receiver is added to the information [originated by] from the originating processor by the receiving interface switch.

47. (Amended) An electronic mail system in accordance with claim 16 wherein:

the identification number is added to the information [originated by] from the originating processor by inputting the identification number to the originating processor.

48. (Amended) An electronic mail system in accordance with claim 16 wherein:

the identification number is added to the information [originated by] from the originating processor by matching an identification of the destination processor with a stored identification of a destination processor and adding an identification number stored with the matched identification of the destination processor to the information as the identification number.

49. (Amended) An electronic mail system in accordance with claim 17 wherein:

the identification number is added to the information [originated] from by the originating processor by matching an identification of the destination processor with a stored identification of a destination processor and adding an identification number stored with the matched identification of the destination processor to the information as the identification number.

50. (Amended) An electronic mail system in accordance with claim 18 wherein:

the identification number is added to the information [originated by] from the originating processor by matching an identification of the destination processor with a stored identification of a destination processor and adding an

A<sub>3</sub>  
concl.

identification number stored with the matched identification of the destination processor to the information as the identification number.

54. (Amended) An electronic mail system in accordance with claim 21 wherein:

an identification number is added to the information [originated by] from the originating processor by inputting the identification number to the originating processor.

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cont.

55. (Amended) An electronic mail system in accordance with claim 21 wherein:

the identification number is added to the information [originated by] from the originating processor by matching an identification of the destination processor with a stored identification of a destination processor and adding an identification number stored with the matched identification of the destination processor to the information as the identification number.

56. (Amended) An electronic mail system in accordance with claim 22 wherein:

the identification number is added to the information [originated by] from the originating processor by matching an identification of the destination processor with a stored identification of a destination processor and adding an

identification number stored with the matched identification of the destination processor to the information as the identification number.

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57. (Amended) An electronic mail system in accordance with claim 23 wherein:

the identification number is added to the information [originated by] from the originating processor by matching an identification of the destination processor with a stored identification of a destination processor and adding an identification number stored with the matched identification of the destination processor to the information as the identification number.

A<sub>5</sub>  
cont.  
62. (Amended) An electronic mail system in accordance with claim 26 wherein:

the identification number is added to the information [originated by] from the originating processor by matching an identification of the destination processor with a stored identification of a destination processor and adding an identification number stored with the matched identification of the destination processor to the information as the identification number.

63. (Amended) An electronic mail system in accordance with claim 27 wherein:

the identification number is added to the information [originated by] from the originating processor by matching an identification of the destination processor with a stored identification of a destination processor and adding an identification number stored with the matched identification of the destination processor to the information as the identification number.

64. (Amended) An electronic mail system in accordance with claim 28 wherein:

the identification number is added to the information [originated by] from the originating processor by matching an identification of the destination processor with a stored identification of a destination processor and adding an identification number stored with the matched identification of the destination processor to the information as the identification number.

68. (Amended) An electronic mail system in accordance with claim 31 wherein:

an identification number is added to the information [originated by] from the originating processor by inputting the identification number to the originating processor.

69. (Amended) An electronic mail system in accordance with claim 31 wherein:

the identification number is added to the information [originated by] from the originating processor by matching an identification of the destination processor with a stored identification of a destination processor and adding an identification number stored with the matched identification of the destination processor to the information as the identification number.

70. (Amended) An electronic mail system in accordance with claim 32 wherein:

the identification number is added to the information [originated by] from the originating processor by matching an identification of the destination processor with a stored identification of a destination processor and adding an identification number stored with the matched identification of the destination processor to the information as the identification number.

71. (Amended) An electronic mail system in accordance with claim 33 wherein:

the identification number is added to the information [originated by] from the originating processor by matching an identification of the destination processor with a stored identification of a destination processor and adding an



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identification number stored with the matched identification of the destination processor to the information as the identification number.

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75. (Amended) An electronic mail system in accordance with claim 36 wherein:

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cont

an identification number is added to the information [originated by] from the originating processor by inputting the identification number to the originating processor.

76. (Amended) An electronic mail system in accordance with claim 36 wherein:

the identification number is added to the information [originated by] from the originating processor by matching an identification of the destination processor with a stored identification of a destination processor and adding an identification number stored with the matched identification of the destination processor to the information as the identification number.

77. (Amended) An electronic mail system in accordance with claim 37 wherein:

the identification number is added to the information [originated by] from the originating processor by matching an identification of the destination processor with a stored identification of a destination processor and adding an

identification number stored with the matched identification of the destination processor to the information as the identification number.

A<sub>7</sub>  
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78. (Amended) An electronic mail system in accordance with claim 38 wherein:

the identification number is added to the information [originated by] from the originating processor by matching an identification of the destination processor with a stored identification of a destination processor and adding an identification number stored with the matched identification of the destination processor to the information as the identification number.

82. (Amended) An electronic mail system in accordance with claim 41 wherein:

A<sub>8</sub>  
cont.  
an identification number is added to the information [originated by] from the originating processor by inputting the identification number to the originating processor.

83. (Amended) An electronic mail system in accordance with claim 41 wherein:

the identification number is added to the information [originated by] from the originating processor by matching an identification of the destination processor with a stored identification of a destination processor and adding an

identification number stored with the matched identification of the destination processor to the information as the identification number.

84. (Amended) An electronic mail system in accordance with claim 42 wherein:

the identification number is added to the information [originated by] from the originating processor by matching an identification of the destination processor with a stored identification of a destination processor and adding an identification number stored with the matched identification of the destination processor to the information as the identification number.

85. (Amended) An electronic mail system in accordance with claim 43 wherein:

the identification number is added to the information [originated by] from the originating processor by matching an identification of the destination processor with a stored identification of a destination processor and adding an identification number stored with the matched identification of the destination processor to the information as the identification number.

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**IN THE ABSTRACT:**

Please delete the present Abstract and insert therefor the following new Abstract.

--Electronic Mail System With RF  
Communications To Mobile Processors

Abstract

A system (100) for transmitting information from one of a plurality of originating processors (A-N) to at least a plurality of destination processors (A-N) which may be transported during operation in accordance with the invention includes at least one gateway switch (14), a gateway switch storing information received from the one of the plurality of originating processors prior to transmission of the information to the at least one destination processor; a RF information transmission network (302) for transmitting the information received from one of the at least one gateway switch by RF transmission to at least one destination processor; at least one interface switch (304), an interface switch connecting a gateway switch to the RF transmission network and transmitting the information received from one of the at least one gateway switch from the one of the plurality of originating processors to the RF information transmission network. The information from the one of the plurality of originating processors is transmitted to a receiving interface switch by the electronic mail system in response to an address of the receiving interface switch which has been added to the information from one of the plurality of originating processors by either the one of the plurality of originating

processors or the gateway switch receiving the information and the information is transmitted from the receiving interface switch to the RF information transmission network with an address of the destination processor to receive the information which has been added by either the originating processor, a gateway switch or the receiving interface switch.~

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1. The information is transmitted from the receiving interface switch to the RF information transmission network with an address of the destination processor to receive the information which has been added by either the originating processor, a gateway switch or the receiving interface switch.

### REMARKS

The present invention connects an electronic mail system with a RF information transmission network for transmitting electronic mail originating at one of a plurality of originating processors to at least one of a plurality of destination processors. A gateway switch stores the information received from the one of the plurality of originating processors prior to transmission of the information to the at least one destination processor. A RF information transmission network transmits the information received from one of the at least one gateway switch by RF transmission to the at least one destination processor. At least one interface switch connects a gateway switch to the RF information transmission network and transmits the information received from one of the at least one gateway switch from the one of the plurality of originating processors to the RF information transmission network. The information from the one of the plurality of originating processors is transmitted to a receiving interface switch by the electronic mail system in response to an address of the receiving interface switch which has been added to the information from the one of the plurality of originating processors by either the one of the plurality of originating processors or the gateway switch receiving the information and the information is transmitted from the receiving interface switch to the RF information transmission network with an address of the destination

processor to receive the information which has been added by either the originating processor, a gateway switch or the receiving interface switch.

The invention has numerous advantages to the user. A minimum amount of information must be provided to initiate the transmission of electronic mail from an originating processor to at least one destination processor which is an identification of the destination processor and information indicating that the message is to be sent by the RF information transmission network. The inputting of information to the electronic mail system that the information is to be sent by the RF information network may be simplified to the extent that an icon driven display associated with the originating processor, such as a mouse, may be used to point to an icon of a radio receiver. Alternatively, an identification of the address of the interface switch through which the information is transmitted to the RF transmission network may be inputted by the operator or a machine operating the originating processor. The entering of the destination processor identified in terms, such as the user's name, may be compared with a look-up table to determine if a match exists. If a match exists, the matched identification of the destination processor supplies an address of the interface switch and an identification of a RF receiver to receive the information and transfer the information to the destination processor. The inputting of the destination processor in

terms, such as the user's name, to an originating processor may be used by the destination processor, gateway switch, or addressed interface switch to look up an identification number of the RF receiver. The electronic mail system or the interface switch may append the identification number of the RF receiver to receive the information which is utilized by the RF information transmission network to determine the final destination of the RF receiver to which the message is broadcast by the RF information transmission network. The appending of the identification number of the RF receiver to the information to be broadcast to the destination processor may be inputted by an operator of the originating processor, added to the information by a comparison of the identification of the destination processor to stored identifications of destination processors stored by the originating processor to which RF messages are to be broadcast by the RF information transmission network to identify the identification number of the RF receiver and the RF information transmission network, or added by a gateway switch in the electronic mail system or the interface switch between the electronic mail system and the RF information transmission network.

The invention minimizes the intelligence for determining the identification number of the RF receiver to receive the information. The result is that the present invention is least expensive to implement and operates most efficiently when the identification of the RF receiver is determined



within the interface switch where the aforementioned matching may be produced without requiring modification of either individual originating processors within the electronic mail system or gateway switches within the electronic mail system which have additional functions for supporting other conventional aspects of electronic mail. However, the intelligence for the determination of an identification number of the RF receiver which transfers the information to the destination processor may be located anywhere between the originating processor and the RF information transmission network. The intelligence for appending of the address of the interface switch to which the information is transmitted by the electronic mail system for entry into the RF information transmission network for broadcast to the RF receiver for transfer to the destination processor may be located within any one of the originating processor, gateway switch or interface switch. See page 37, lines 24-35 through page 39, lines 1-29 of the specification. The specification has been amended as requested by the Examiner to improve its form for examination.

Claims 1 and 13 stand rejected under 35 U.S.C. §103 as being unpatentable over the prior art electronic mail system disclosed in Fig. 1 in view of United States Patent 5,128,981 (Tsukamoto et al). The Examiner reasons as follows:

"The prior art electronic mail system disclosed by the applicant in figure 1 constitutes the subject matter claimed in claim 1 except for the use of a RF transmission network within the e-mail system.

Tsukamoto et al teach the use of a RF transmission network to communicate data from an originating processor to a destination processor. With the knowledge provided by Tsukamoto, it would have been obvious to one of ordinary skill in the art to utilize the RF transmission in the prior art e-mail system to transfer messages from the originating processor to the destination processor via radio transmission within a single e-mail system.

Furthermore, it is inherent with the combination that there be an interface switch coupled between the gateway switch and RF network to allow the message to be transferred to the RF network.

In addition, an interface switch (communication controller) receives information from the processor and adds an identification address to select the proper base station (RF transmission) for transmission of information to the RF receiver. (See col. 7, line 60 to col. 10, line 8 for a complete description).

With regard to claim 13, it is inherent that an RF receiver be connected to the destination processor in order to transfer the information sent from the origination processor to the destination processor (i.e. to enable the final destination to receive the message intended for it) and further that the originating processor functions also as a destination processor in order to receive feedback information from the information it originally sent."

The Examiner has provided no basis in the record why a person of ordinary skill in the art would be motivated to make the proposed combination set forth by the Examiner to arrive at the subject matter of claims 1 and 13. Claim 1 defines an electronic mail system for transmitting information from one of a plurality of originating processors to at least one of a plurality of destination processors comprising at least one gateway switch, the gateway switch storing the information received from the one of the plurality of originating

processors prior to transmission of the information to the at least one destination processor; a RF information transmission network for transmitting the information received from one of the at least one gateway switch by RF transmission to the at least one destination switch; at least one interface switch with an interface switch connecting a gateway switch to the RF transmission network and transmitting the information received from one of the at least one gateway switch from the one of the plurality of originating processors to the RF information transmission network with the information from the one of the plurality of originating processors being transmitted to a receiving interface switch by the electronic mail system in response to an address of the receiving interface switch which has been added to the information from the one of the plurality of originating processors by either the one of the plurality of originating processors or the gateway switch receiving information and the information is transmitted from the receiving interface switch to the RF information transmission network with an address of the destination processor to receive the information which has been added by either the originating processor, the gateway switch or the receiving interface switch. The only way that a person of ordinary skill in the art would be led to the subject matter of claim 1 is by resort to the Applicants' specification. The Examiner has not provided the necessary teaching which would

be a basis for a person of ordinary skill in the art to make the proposed modification.

Neither the admitted prior art of Fig. 1 or Tsukamoto et al teach, alone or in combination, anything corresponding to a system which permits information from an originating processor within an electronic mail system to be transmitted to a destination processor within an electronic mail system through an interface switch and an RF information transmission network. There is nothing in the prior art relied upon by the Examiner which teaches the foregoing combination which is recited in claims 1 and 13.

Tsukamoto et al do not suggest to a person of ordinary skill in the art anything more than a system which permits terminals to communication within a private branch exchange with other terminals by RF communications which are controlled by a data processing unit 2. The communication controller 4 controls communication channels to be used between the data terminals 1 and the base stations 3. As is clearly taught in column 5, lines 52-56, the controller 4 functions as a private branch exchange.

The Examiner's reliance upon doctrine of inherency as a basis for concluding "that there [must] be an interface switch coupled between a gateway switch and a RF network to allow the message to be transmitted to the RF network" is erroneous. For subject matter to be inherent, it is required for the Examiner to demonstrate that subject matter which is alleged

to be inherent is the necessary result of the disclosed subject matter. An interface switch is not the only way of connecting an electronic mail system to a RF information transmission network. An electrical conductor without any intelligence could be used to connect the electronic mail system to the RF information transmission network. Therefore, an interface switch is not an inherent way of connecting the electronic mail system to a RF information transmission network. There is nothing in the record which supports the conclusion that an interface switch would be provided between an electronic mail system and an RF information transmission network by a person of ordinary skill in the art even assuming *arguendo* (a point which Applicant disputes) that it is obvious to somehow combine the electronic mail system of Fig. 1 to Tsukamoto et al.

The Examiner should note that the interface switch is recited as "connecting a gateway switch to the RF information transmission network and transmitting the information received from one of the at least one gateway switch from the one of the plurality of originating processors to the RF information transmission network". The communication controller, as described above, which is element 4 in Fig. 1, does not perform a function analogous to the claimed function of connecting a gateway switch within an electronic mail system to a RF information transmission network.

It is noted that the Examiner has not even attempted to explain how a person of ordinary skill in the art would be motivated from the prior art of Fig. 1 and Tsukamoto et al to arrive at the subject matter of claim 1 including the recited function:

"the information from the one of the plurality of originating processors is transmitted to a receiving interface switch by the electronic mail system in response to an address of the receiving interface switch which has been added to the information from one of the plurality of originating processors by either one of the plurality of originating processors or the gateway switch receiving the information and the information is transmitted from the receiving interface switch to the RF information transmission network with an address of the destination processor to receive the information which has been added by either the originating processor, a gateway switch or the receiving interface switch".

There is no basis in the record for concluding that the recited function of the interface switch is inherent once the burden of proof for providing inherency that the function of the interface switch must necessarily follow is considered by the Examiner. As has been explained above with reference to the advantages provided by the invention, all that is necessary with the present invention to utilize the RF information transmission network to transmit information originating from one of a plurality of originating processors to at least one of a plurality of destination processors is an address of the receiving interface switch being added to the information from the originating processor. Neither the admitted prior art of Fig. 1 nor Tsukamoto et al having

anything analogous to this function. Moreover, there is no basis why a person of ordinary skill in the art would consider this function to be obvious from the teachings of the admitted prior art or Tsukamoto et al because neither the admitted prior art nor Tsukamoto et al is concerned with providing a user friendly electronic mail system which provides for RF transmission as the link between the originating processor and one or more destination processors.

Furthermore, the Examiner's reliance upon the doctrine of inherency for the rejection of claim 13 that "it is inherent that an RF receiver be connected to the destination processor in order to transfer the information sent from the originating processor to the destination processor...and further that the originating processor functions also as a destination processor in order to receipt feedback information from the information it originally sent" is erroneous. The Examiner has not demonstrated why this is the necessary result. The system of Tsukamoto et al is the only prior art relied upon by the Examiner as allegedly teaching RF communications between originating and destination processors. However, as has been explained above, with regard to Tsukamoto et al their teachings are directed to a private branch exchange which is not analogous to the claimed invention which interfaces an electronic mail system to an RF information transmission network for the purpose of linking a plurality of originating

processors to at least one of a plurality of destination processors.

In summary, it is submitted that the rejection of claims 1 and 13 is based upon impermissible hindsight in view of the Applicants' specification. The prior art does not even suggest the use of an RF information transmission network as part of a link between originating processors and destination processors in an electronic mail system. Moreover, the proposed combination of references clearly does not suggest the combination of an interface switch with the admitted prior art of Fig. 1 and further, the information transmission from the one of the plurality of originating processors to the receiving interface switch in response to an address of the receiving interface switch which has been added to the information from one of the plurality of originating processors by either the one of the plurality of originating processors or the gateway switch receiving the information and the information being transmitted from the receiving interface switch to the RF information transmission network with an address of the destination processor to receive the information which has been added by either the originating processor, a gateway switch or an interface switch.

Claims 3, 4, 14-18, 24-33, 44-50 and 58-71 stand rejected under 35 U.S.C. §103 as being unpatentable over the prior art e-mail system disclosed in Fig. 1 in view of Tsukamoto et al



and further in view of Andros et al. The Examiner reasons as follows:

Consider claim 3. The combination fails to teach the assembling of messages form a plurality of processors into a packet and subsequently transmitting the packet to the RF transmission network. However, Andros et al in a paging network teach to packetize and transmit a plurality of messages along with their associated identification codes to a receiving switch. With the teaching provided by Andros et al, it would have been obvious to one of ordinary skill in the art to utilize the information packet technique in the combination to avoid the transmission of each message individually thus providing an efficient transmission system.

In addition, with consideration to claim 4, it is inherent that once the information packet is received at the receiving point, the packet is disassembled and each piece of information is transmitted to the destination processor that corresponds with each identification code.

With consideration to claims 14-18, 24-33, 44-50 and 58-71, it is fully disclosed by Andros et al that the address or identification number of the receiving point is added to the message being transmitted (see figure 3, items 66 and 78). Further, claiming the identification code is added at different switches would have been obvious since this is a matter of relocating parts thus lacking any criticality or showing by applicant and does not lend itself to be patentably distinct.

In addition, specifically regarding claims 44, 46, 48-50, 58, 60, 62-65, 67, and 69-71, it is disclosed in Andros et al (column 16, lines 18-39) that an identification code is referenced in a switch memory and a corresponding address is added to the message to route the message to its final destination.

Thus, it is inherent to reference and add the necessary identification codes to the message in order for the message to reach the destination the message is intended for."

This ground of rejection is traversed for the following reasons.

Andros et al disclose a paging network for the purpose of transmitting data. However, there is nothing in Andros et al which suggests combining of an RF information transmission network and an electronic mail system. While Andros et al do teach a packetizing network, there is no basis why a person of ordinary skill in the art would consider the teachings of Andros et al to render obvious the subject matter of claim 3 which further limits claim 1 in reciting that the address of the destination processor is an identification number of a RF receiver and the RF information transmission network which receives the information and transfers the information to the destination processor and the receiving interface switch stores information which has been stored by at least one gateway switch that is received from a plurality of originating processors, assembles the information from a plurality of originating processors into a packet and transmits the packet to the RF information transmission network. Andros et al is clearly lacking any teaching regarding application of their system to the claimed electronic mail system of claim 1 including gateway switch, an interface switch and the recited function of the adding of an address of the receiving interface switch. It is submitted that the Examiner is relying upon impermissible hindsight in the rejection of claim 3.

Claim 4 further limits claim 3 in reciting that a switch receives the packet from the receiving interface switch and disassembles the packet into information from a plurality of originating processors and the RF information transmission network transmits the disassembled information including the identification number of the RF receiver transferring the information to the destination processor to a switch in the RF information transmission network storing a file identified by the identification number and any destination of the RF receiver in the RF information transmission network to which the information and identification number is to be transmitted by the RF information transmission network and adds any destination of the RF receiver to the information and the RF information transmission network in response to any added destination transmits the information and identification number to the destination for the RF broadcast to the RF receiver for transfer to the destination processor. While Andros et al, as explained above, do disclose a RF data transmission network using packetizing, there is clearly no teaching suggesting the combination of the RF information transmission network including its function in receiving a packet from the receiving interface switch or the processing of the disassembled information.

Claims 14-18 recite details of the address of the receiving interface switch and the destination processor. Andros et al clearly do not disclose anything analogous to the subject matter as alleged by the Examiner.

Furthermore, claims 24-33 recite details of the address of the receiving interface switch and the identification number of the RF receiver. Again, it is submitted that Andros et al have nothing to do with this subject matter which includes aspects of the interface switch.

Similarly, it is submitted that Andros et al do not teach the subject matter of claims 44-50 and 58-71 which also pertain to the address of the interface switch and the identification number of the RF receiver.

Andros et al's teachings only pertain to a data transmission network and do not suggest anything regarding the connecting together of an electronic mail system and an RF information transmission network. The referenced parts of Andros et al are particular to their data transmission network which is not disclosed as being used in an electronic mail system. Therefore, the processing involving an interface switch clearly is not disclosed by Andros et al.

The Examiner concludes that "it is inherent to reference and add the necessary identification codes to the message in order for the message to reach the destination the message is intended for". While this statement in an abstract form would be true once it is suggested that a particular message be sent

to a particular destination, there is clearly no basis for regarding anything of the rejected claims as being inherent in the cited prior art. The Examiner must demonstrate that that which is alleged to be inherent is the necessary result of the prior art upon which the Examiner is relying. The Examiner has failed to do this in every instance in which he has relied on inherency.

Claim 7 stands rejected under 35 U.S.C. §103 as being unpatentable over the prior art e-mail system disclosed by the Applicant in Fig. 1 in view of Tsukamoto et al further in view of United States Patent 4,768,087 (Taub et al). The Examiner reasons as follows:

"Consider claim 7. The combination (stated above) fails to teach the transmission of information through a public switched telephone network without transmission by the RF transmission network. However, Taub et al teach for information to be transmitted to a destination via a telephone line, see col. 7, lines 24-27, as opposed to the alternate means of communication. It would therefore have been obvious to one of ordinary skill in the art to utilize the teaching of Taub et al in the combination in order to transmit information through a PSTN as opposed to the alternate form of communication between the origination and destination points."

This ground of rejection is traversed for the following reasons.

While Taub et al do teach in column 7, lines 24-28 that autodial modem 105 associated with a main computer is used for transferring electronic mail over telephone line 37. However, this teaching clearly does not supply the deficiencies noted above with regard to claim 1. Moreover, there is no basis why

a person of ordinary skill in the art would be led to combine the teachings of Taub et al with the prior art relied upon by the Examiner in the rejection of claim 1 which defines, as stated above, an electronic mail system including an RF information transmission system which links a plurality of originating processors with a plurality of destination processors for a gateway switch and an interface switch including the recited functions.

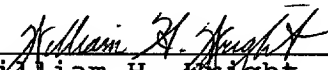
Claims 9 and 10 stand rejected under 35 U.S.C. 103 as being unpatentable over the prior art e-mail system disclosed by Applicant in Fig. 1 in view of Tsukamoto et al and Andros et al as applied to claims 3 and 4 and further in view of Taub et al. This ground of rejection is traversed for the reasons set forth above with respect to claims 3, 4 and 7.

In view of the foregoing amendments and remarks, it is submitted that each of the claims in the application is in condition for allowance. Accordingly, favorable reconsideration of the rejection of claims 1, 3, 4, 7, 9, 10, 13-18, 24-33, 44, 50 and 58-71 and early allowance of all of the claims is respectfully requested.

To the extent necessary, the Applicants petition for an extension of time under 37 C.F.R. §1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account

No. 08-1650, and please credit any excess fees to said deposit account.

Respectfully submitted,  
HENDERSON & STURM

  
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